

Amendments to the Claims

Please Amend the Claims as follows:

1. (Previously Amended) An adsorption apparatus for treatment of wastewater comprising, in combination:

an inlet for the wastewater connected to a metals trap which adsorbs metals; and

a second trap which filters organic materials from the wastewater, positioned between the inlet and the metals trap, wherein the second trap at least partially comprises fish bone char.
2. (Original) The adsorption apparatus of claim 1 further comprising a pH controller, adjusting the pH of the wastewater to a predetermined range.
3. (Original) The adsorption apparatus of claim 2 wherein the predetermined range is pH 5.5-7.5.
4. (Original) The adsorption apparatus of claim 1 further comprising a first trap positioned between the inlet and the second trap which filters solids from the wastewater of greater than a predetermined size.

5. (Original) The adsorption apparatus of claim 4 wherein the predetermined size is about 5 microns.
6. (Original) The adsorption apparatus of claim 4 wherein the first trap comprises at least one of silica sand, charcoal, and coal.
7. (Currently Amended) An adsorption apparatus for treatment of wastewater without the use of ion exchange techniques comprising, in combination:
- an inlet for the wastewater connected to a metals trap which adsorbs metals; and
 - a second trap which adsorbs organic materials and metals from the wastewater, positioned between the inlet and the metals trap;
activated carbon in at least one of the second trap and the metals trap;
- wherein the second trap at least partially comprises a phosphate having a particle size of 4 to 34 mesh; and
- a chamber containing the metals trap and a second chamber containing the phosphate, wherein a flow of wastewater travels from the inlet to the metals trap.
8. (Currently Amended) An adsorption apparatus for treatment of wastewater without the use of ion exchange techniques comprising, in combination:

an inlet for the wastewater connected to a metals trap which adsorbs metals;

a second trap which adsorbs organic materials and metals from the wastewater, positioned between the inlet and the metals trap, wherein the second trap at least partially comprises a phosphate;

activated carbon in at least one of the second trap and the metals trap;

a chamber containing the metals trap and a second chamber containing the phosphate, wherein a flow of wastewater travels from the inlet to the metals trap;

a plurality of valves for each chamber, controlled by a corresponding controller in one of an operational mode and a diagnostic/service mode; and

a drain positioned on each chamber and at least one valve on each chamber; wherein in the diagnostic/service mode each chamber can be isolated from the flow of wastewater and the corresponding drain can be opened, permitting flow through the drain.

9. (Currently Amended) An adsorption apparatus for treatment of wastewater without the use of ion exchange techniques comprising, in combination:

an inlet for the wastewater connected to a metals trap which adsorbs metals;

a second trap which adsorbs organic materials and metals from the wastewater, positioned between the inlet and the metals trap, wherein the second trap at least partially comprises a phosphate;

activated carbon in at least one of the second trap and the metals trap;

a chamber containing the metals trap and a second chamber containing the phosphate, wherein a flow of wastewater travels from the inlet to the metals trap; and

an oxidizer incorporated as part of at least one of the metals trap and the second trap.

10. (Original) The adsorption apparatus of claim 1 further comprising activated carbon in at least one of the second trap and the metals trap.

11. (Currently Amended) The adsorption apparatus of claim 21 wherein the metals trap comprises a metal oxyhydroxide.

12. (Original) The adsorption apparatus of claim 1 further comprising an additional oxidizer incorporated as part of at least one of the metals trap and the second trap.

13. (Withdrawn) A method of adsorption and removal of impurities from wastewater comprising, in combination the steps of:

restricting a size of the impurities to less than a predetermined size by passing the wastewater through a first chamber containing a solids trap; and passing the wastewater through a second chamber after passage through the first chamber, the second chamber containing a second trap for organic materials at least partially comprising fish bone char; wherein a permanganate is incorporated as part of at least one of the metals trap and the second trap.

14. (Withdrawn) The method of claim 13 further comprising the steps of:
adjusting a pH and a temperature of the wastewater prior to introduction of the wastewater to the first chamber.
15. (Withdrawn) The method of claim 13 further comprising the step of:
passing the wastewater through a third chamber containing a third trap for adsorption of metals;
wherein the third trap comprises metal oxyhydroxide.
16. (Withdrawn) The method of claim 15 wherein each chamber is adapted for backwashing, permitting wastewater to be flushed out of each chamber separately.

Claims 17-20 (Cancelled).

21. (Currently Amended) An adsorption apparatus for treatment of wastewater comprising, in combination:

an inlet for the wastewater connected to a metals trap which adsorbs metals;

a first trap which filters solids from the wastewater of greater than a predetermined size and comprises one of charcoal and coal;

a second trap which adsorbs organic materials and metals from the wastewater, is positioned between the inlet and the metals trap, ~~wherein the second trap~~ and at least partially comprises a phosphate;

a first chamber which contains the first trap and is positioned between the inlet and a second chamber containing the phosphate, and a third chamber containing the metals trap, wherein a flow of wastewater travels from the inlet to the metals trap; and

an oxidizer incorporated as part of at least one of the metals trap and the second trap, wherein the oxidizer is ~~potassium~~ permanganate.